

BBBBBBBBBBBBBBB AAAAAAAA SSSSSSSSSSSS RRRRRRRRRRRRR TTTTTTTTTTTTTTTT LLL
BBBBBBBBBBBBBBB AAAAAAAA SSSSSSSSSSSS RRRRRRRRRRRRR TTTTTTTTTTTTTTTT LLL
BBBBBBBBBBBBBBB AAAAAAAA SSSSSSSSSSSS RRRRRRRRRRRRR TTTTTTTTTTTTTTTT LLL
BBB BBB AAA AAA SSS
BBBBBBBBBBBBBBB AAA AAA SSSSSSSSS
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BBB BBB AAAAAAAA SSS
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BBBBBBBBBBBBBBB AAA AAA SSSSSSSSSSSS
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FILEID**BASENDGSB

BBBBBBBBBB	AAAAAA	SSSSSSSS	EEEEEEEEE	NN	NN	DDDDDDDD	GGGGGGGG	SSSSSSSS	BBBBBBBB
BBBBBBBBBB	AAAAAA	SSSSSSSS	EEEEEEEEE	NN	NN	DDDDDDDD	GGGGGGGG	SSSSSSSS	BBBBBBBB
BB	BB	AA	AA	SS	EE	NN	DD	DD	GG
BB	BB	AA	AA	SS	EE	NN	DD	DD	GG
BB	BB	AA	AA	SS	EE	NNNN	NN	DD	GG
BB	BB	AA	AA	SS	EE	NNNN	NN	DD	GG
BBBBBBBBBB	AA	AA	SSSSSS	EEEEEEE	NN	NN	DD	DD	GG
BBBBBBBBBB	AA	AA	SSSSSS	EEEEEEE	NN	NN	DD	DD	GG
BB	BB	AAAAAA	SS	EE	NN	NNNN	DD	DD	GG
BB	BB	AAAAAA	SS	EE	NN	NNNN	DD	DD	GG
BB	BB	AA	AA	SS	EE	NN	DD	DD	GG
BB	BB	AA	AA	SS	EE	NN	DD	DD	GG
BBBBBBBBBB	AA	AA	SSSSSSSS	EEEEEEE	NN	NN	DDDDDDDD	GGGGGG	SSSSSSSS
BBBBBBBBBB	AA	AA	SSSSSSSS	EEEEEEE	NN	NN	DDDDDDDD	GGGGGG	SSSSSSSS

LL		SSSSSSSS
LL		SSSSSSSS
LL		SS
LL		SSSSSSSS
LL		SSSSSSSS

```
1 0001 0 MODULE BASSEND_GSB (
2 0002 0 IDENT = '1-002'
3 0003 0 )
4 0004 1 BEGIN
5 0005 1 ****
6 0006 1 ****
7 0007 1 ****
8 0008 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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25 0025 1 ****
26 0026 1 ****
27 0027 1 ****
28 0028 1 ****
29 0029 1 ****
30 0030 1 ****
31 0031 1 **+
32 0032 1 * FACILITY: BASIC-PLUS-2 Frame Support
33 0033 1 *
34 0034 1 * ABSTRACT:
35 0035 1 *
36 0036 1 * These routines set up and tear down frames for BASIC-PLUS-2.
37 0037 1 * Frames are used for main routines, external functions,
38 0038 1 * external subroutines, internal functions (both DEFs and DEF*s)
39 0039 1 * internal subroutines (GOSUBs) and condition handlers.
40 0040 1 *
41 0041 1 * ENVIRONMENT: VAX-11 user mode
42 0042 1 *
43 0043 1 * AUTHOR: John Sauter, CREATION DATE: 10-Oct-78
44 0044 1 *
45 0045 1 * MODIFIED BY:
46 0046 1 *
47 0047 1 * 1-001 - Original.
48 0048 1 * 1-002 - Change BASS$ to BSFS$ prefix for BASIC stack frame. JBS 08-FEB-1979
49 0049 1 * --
50 0050 1 *
51 0051 1 !<BLF/PAGE>
```

```
53      0052 1 | SWITCHES:
54      0053 1 | 
55      0054 1 | 
56      0055 1 | 
57      0056 1 | SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
58      0057 1 | 
59      0058 1 | 
60      0059 1 | LINKAGES:
61      0060 1 | 
62      0061 1 | 
63      0062 1 | LINKAGE
64      0063 1 | BASSINIT_LINK = JSB (REGISTER = 0, REGISTER = 1, REGISTER = 2) : !
65      0064 1 | GLOBAL (BSF$A_MAJOR_STG = 11, BSF$A_MINOR_STG = 10, BSF$A_TEMP_STG = 9)      !
66      0065 1 | NOPRESERVE (8, 7, 6, 5, 4, 3, 2, 1, 0);
67      0066 1 | 
68      0067 1 | TABLE OF CONTENTS:
69      0068 1 | 
70      0069 1 | 
71      0070 1 | 
72      0071 1 | FORWARD ROUTINE
73      0072 1 | BASSEND_GSB_R8 : NOVALUE BASSINIT_LINK;      ! end GOSUB
74      0073 1 | 
75      0074 1 | 
76      0075 1 | INCLUDE FILES:
77      0076 1 | 
78      0077 1 | 
79      0078 1 | REQUIRE 'RTLIN:RTLPSECT';                      ! macros for defing psects
80      0173 1 | 
81      0174 1 | REQUIRE 'RTLIN:BASFRAME.REQ';                  ! Define frame structure
82      0377 1 | 
83      0378 1 | 
84      0379 1 | MACROS:
85      0380 1 | 
86      0381 1 |     NONE
87      0382 1 | 
88      0383 1 | EQUATED SYMBOLS:
89      0384 1 | 
90      0385 1 |     NONE
91      0386 1 | 
92      0387 1 | PSECTS:
93      0388 1 | 
94      0389 1 | DECLARE_PSECTS (BAS);                      ! Declare psects for BASS$ facility
95      0390 1 | 
96      0391 1 | OWN STORAGE:
97      0392 1 | 
98      0393 1 |     NONE
99      0394 1 | 
100     0395 1 | EXTERNAL REFERENCES:
101     0396 1 | 
102     0397 1 | 
103     0398 1 | EXTERNAL ROUTINE
104     0399 1 |     BASS$STOP : NOVALUE;                  ! signals error
105     0400 1 | 
106     0401 1 | 
107     0402 1 | + The following are the error codes used in this module.
108     0403 1 | -
```

BASEND_GSB
1-002

N 6
16-Sep-1984 00:22:52 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 11:54:56 [BASRTL.SRC]BASENDGSB.B32;1

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(2)

: 110 0405 1 EXTERNAL LITERAL
: 111 0406 1 BASSK_RETWITGOS : UNSIGNED (8);
: 112 0407 1

! RETURN without GOSUB

```
114      0408 1 GLOBAL ROUTINE BASSEND_GSB_R8          ! end of GOSUB frame
115      0409 1 : NOVALUE BAS$INIT_LINK =
116      0410 1
117      0411 1 ++
118      0412 1 FUNCTIONAL DESCRIPTION:
119      0413 1
120      0414 1     Check a BASIC-PLUS-2 RETURN statement to be sure that
121      0415 1     the return is being made from a GOSUB.  This is needed
122      0416 1     since GOSUB has no lexical scope.
123      0417 1
124      0418 1 FORMAL PARAMETERS:
125      0419 1
126      0420 1     NONE
127      0421 1
128      0422 1 IMPLICIT INPUTS:
129      0423 1
130      0424 1     The frame, as set up by BAS$INIT_GSB_R8.
131      0425 1
132      0426 1 IMPLICIT OUTPUTS:
133      0427 1
134      0428 1     NONE
135      0429 1
136      0430 1 ROUTINE VALUE:
137      0431 1
138      0432 1     NONE
139      0433 1
140      0434 1 COMPLETION CODES:
141      0435 1
142      0436 1     NONE
143      0437 1
144      0438 1 SIDE EFFECTS:
145      0439 1
146      0440 1     May signal an error
147      0441 1
148      0442 1 --
149      0443 1
150      0444 2 BEGIN
151      0445 2
152      0446 2 BUILTIN
153      0447 2     FP,
154      0448 2     SP;
155      0449 2
156      0450 2 REGISTER
157      0451 2     FMP : REF BLOCK [0, BYTE] FIELD (BSF$FCD);
158      0452 2
159      0453 2
160      0454 2 * Give an error message if this RETURN does not correspond to
161      0455 2 a GOSUB.
162      0456 2
163      0457 2     FMP = .FP;
164      0458 2
165      0459 2     IF (.FMP [BSF$B_PROC_CODE] NEQ BSF$K_PROC_GOSB) THEN BAS$STOP (BASSK_RETWTGOS);
166      0460 2
167      0461 2
168      0462 2 * All is ok, return to the compiled code, which will issue a
169      0463 2     RET instruction to return to the caller of BAS$INIT_GOSUB.
170      0464 2 *
```

: 171 0465 1 END;

!of BASSEND_GSB_R8

.TITLE BASSEND_GSB
.IDENT '1-002'

.EXTRN BASS\$STOP, BASSK_RETWITGOS

.PSECT _BASS\$CODE,NOWRT, SHR, PIC,2

50	5D	00 00000	BASSEND_GSB_R8::	
06	E5	A0 91 00003	MOV[FP, FMP
		0B 13 00007	CMPB	-27(FMP), #6
00000000G	7E	00G 8F 9A 00009	BEQL	1S
		01 FB 0000D	MOVZBL	#BASSK_RETWITGOS. -(SP)
		05 00014 1\$:	CALLS	#1, BASS\$STOP
			RSB	

: 0457
0459

: 0465

: Routine Size: 21 bytes, Routine Base: _BASS\$CODE + 0000

172	0466	1	
173	0467	1	END
174	0468	1	
175	0469	0	ELUDOM

PSECT SUMMARY

Name	Bytes	Attributes
_BASS\$CODE	21	NOVEC,NOWRT, RD, EXE, SHR, LCL, REL, CON, PIC,ALIGN(2)

COMMAND QUALIFIERS

: BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LIS\$:BASSENDGSB/OBJ=OBJ\$:BASSENDGSB MSRC\$:BASSENDGSB/UPDATE=(ENH\$:BASSENDGSB
)

: Size:	21 code + 0 data bytes
: Run Time:	00:02.8
: Elapsed Time:	00:06.8
: Lines/CPU Min:	10158
: Lexemes/CPU-Min:	29068
: Memory Used:	29 pages
: Compilation Complete	

0022 AH-BT13A-SE
VAX/VMS V4.0

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